# Introduction

## Financial Analysis

Financial statements of an organization comprises of balance sheet and profit and loss account. Balance sheet reflects the financial position on a particular date in terms of the structure of assets, liabilities and owner's equity while profit and loss account shows the results of operations during a certain period of time in terms of the revenues obtained and the cost incurred during the year. Thus the financial statements provide a summarized view of the financial position and operations of a firm. Therefore much can be learnt about a firm from a careful examination of its financial statements and thus they serve as invaluable performance reports. The analysis of financial statements is, thus, an important aid to financial analysis.

The focus of financial analysis is on key figures in the financial statements and the significant relationship that exists between them. The analysis of financial statements is a process of evaluating the relationship between component parts of financial statements to obtain a better understanding of the firm's position and performance. As a financial analyst, the work of analysis should be performed under the following steps:

Step 1: Select the information relevant to the decision under the consideration from the total information contained in the financial statements.

Step 2: Arrange the information in a way to highlight significant relationships

Step 3: Interpret and draw inferences and conclusions.

Thus it can be concluded that financial analysis is a process of selection, relation and evaluation.

## Objectives of financial analysis

- Measuring financial soundness
- Judging solvency
- Measuring profitability
- Judging operational efficiency
- Indicating trends of achievements
- Assessing the growth potential
- Inter-firm and intra-firm comparison
- Deciding future line of action

- Systematic presentation of data

## Techniques of financial analysis

- Comparative financial statements
- Common-size financial statements
- Trend analysis
- Ratio analysis
- Break-even analysis
- Cash flow analysis

## Ratio analysis

Ratio analysis is a widely used tool of financial analysis. It can be used to compare the risk and return relationships of firms of different sizes. It is defined as the systematic use of ratio to interpret the financial statements so that the strengths and weaknesses of a firm as well as its historical performance and current financial conditions can be determined. The term ratio refers to the numerical or quantitative relationship between two items/variables. This relationship can be expressed as (i) percentages; (ii) fraction and (iii) proportion of numbers.

Ratios reveal the relationship in a meaningful way so as to enable equity investors; management and lenders to make better investment and credit decisions.

# Productivity

Productivity is an overall measure of the ability to produce goods or services. More specifically, it is the measure of how specified resources are managed to accomplish timely objectives which are stated in terms of quantity and quality. Productivity is also defined as an index that measures output (goods and services) relative to the input (labor, materials, energy, etc.), used to produce the output.

Productivity is an objective concept. It can be measured against a universal standard. Thus, organizations can monitor productivity for corporate planning, organization improvement, comparison to competitors as well as for controlling performance according to budget.

Productivity is useful as a relative measure of actual output of production compared to the actual input of resources to make inter-firm or intra-firm comparisons. As output increases for a level of input, or as the amount of input decreases for a constant level of output, an increase in productivity occurs. Therefore, a "productivity measure" describes how well the resources of an organization are being used to produce input.

Productivity is usually expressed in one of three forms: partial factor productivity, multifactor productivity, and total productivity.

- Partial-factor productivity -It only considers a single input in the ratio. Thus it is the ratio of total output to a single input. Partial factor measures include labor productivity, capital productivity, energy productivity and materials productivity .
- Multifactor productivity -A multifactor productivity measure utilizes more than a single factor, for example, both labor and capital. Hence, multifactor productivity is the ratio of total output to a subset of inputs
- Total factor productivity –It is measured by combining the effects of all the resources used in the production of goods and services (labor, capital, raw material, energy, etc.) and dividing it into the output.

## Review Of Literature

| Title | Author | Year, Country | Objective | Sample Size(SS), Data Source(DS) and Period of Study(POS) | Data Analysis Method | Findings | Research Gap |
|---|---|---|---|---|---|---|---|
| The Impact of Liquidity on Profitability of Some Selected Companies: The Financial Statement Analysis(FSA) Approach | Chukunweike victor Ehiedu | 2014 Nigeria | To determine the relationship between liquidity and profitability | SS- Two listed industrial/domestic product manufacturing company DS- Annual Reports and accounts | Simple correlation analysis | There is positive correlation between current ratio and profitability and no definite correlation between acid test ratio and profitability. | The factor causing relationship between profitability and liquidity could be studied. |
| A Study on Working Capital Management Through Ratio Analysis with Special Reference to Rajasthan Drugs & | Kumawat.Y | 2014 Jaipur, India | 1. To determine the amount of working capital of Rajasthan Drugs & Pharmaceuticals Ltd. 2. To analyze the financial performanc | SS-1 DS- Annual reports POS-5 Years (2007-12) | Ratio analysis | 1. Company has good liquidity position but it is continuously decreasing over the years. 2. Company | Comparative study can be done. |

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| Pharmaceuticals Ltd. | | | e of the sample unit. | | | is prompt in making payments. | |
| A Study on the Working Capital Ratio of The District Central Co-operative Banks in Tirunelveli Region, Tamilnadu | Mahendran. A, Ambika.R | 2014 Tamilnadu, India | To analyze the working capital ratio of the sample units and to offer suitable suggestions for the development | SS-4 banks DS-Annual reports POS-11 Years (1998 to 2008) | Average, working capital ratios | In order to increase their lending activities, banks should actively mobilize deposits from public and try to transfer substantial profits to reserve funds. | Comparative study of cooperative and commercial banks can be done. |
| Financial Statement Analysis of Raju Engineering Company Ltd. | Khakhdia.D | 2013 Delhi, India | 1. To study profitability. 2. To know financial Structure. | SS-1, DS- Publish Annual Report POS- 7 Years (2004-05 to 2010-11 | T Test | 1. Profitability is fluctuating. 2. Less Debt in capital structure | Narrow outlook of overall industry |
| A Study on Liquidity and Profitability of Selected Indian Cement Companies: - A | Sandhar S.K, Janglani S. | 2013 Indore, India | 1. To analyze the working capital management in terms of profitability and liquidity. | SS- 6 cement companies listed in India DS-Published Annual Reports POS-5 Years (2008-12) | Correlation analysis, regression analysis, ANOVA | Profitability and liquidity are inversely related or there must always be a trade-off | Period of Study could have been more. |

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| Regression Modeling Approach | | | 2. To find out impact of liquidity profitability and working capital on firm's financial aspects | | | between profitability and liquidity. | |
| A Comparative Study of Financial Performance of SAIL and TATA Steel Ltd. | Singla.V | 2013 Haryana, India | To analyze and evaluate the working capital management, profitability and trends in financial performance of the selected units. | SS- 2 Leading steel companies DS- Annual reports POS- 5 Years (2007-08 to 2011-12) | Comparative analysis | Performance of Tata Steel Ltd. is better than SAIL because Tata has greater net profit and better inventory management. | Financial performance covering a large period could be done to get a much clear picture of financial performance. |
| A Comparative Analysis of the Financial Ratios of Listed Firms Belonging to the Education Sub-Sector in the Philippines for the Years 2009- | Tugas.C.F | 2012 Manila, Philippines | 1. To determine the financial strength of the units. 2. To determine norms, industry figures and peculiarities of the education sub-sector of | SS- 3 listed firms in education sub-sector DS- Philippines stock exchange POS- 3 Years (2009-11) | Du- Pont equations | FEU is the most financially healthy out of the 3 units. | More units covering a longer period could be studied |

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| 2011 | | | Philippines | | | | |
| A Financial Ratio Analysis of Krishak Bharati Co-operative Ltd. | Patel.S.V, Mehta.B.C | 2012 Surat, India | 1. To analyze the profitability of the company. 2. To assess the growth potential of the company 3. To study its organizational structure and present position | SS- 1 DS- Published annual report POS- 9 Years (2001-09) | T-Test | 1. Operating expenses are more 2. Credit policy should be made effective | 1. Can be applied to other similar companies to know the prevailing situation in whole industry. 2. Human resource accounting could be performed 3. Comparative study of more units could be performed |
| An Empirical Study Profitability Analysis of Selected Steel Companies in India | Venkatesan. T, Nagarjan.S. K | 2012 Tamilnadu, India | 1. To ascertain the overall earnings performance of selected steel companies 2. To evaluate their profitability 3. To | SS- 6 steel companies of India DS- Official website of NSE and Financial reports of selected companies POS- 5 Years (2006- 11) | Two way ANOVA, correlation, coefficient of variation | Profitability depends upon the better utilization of resources, cut-off expenses and quality of management function | Profitability ratios based on capital and productivity could have been calculated. |

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| | | | analyze profit related to equity shares | | | in the products, customer services, manpower, goodwill and market share. | |
| Trade-off between Liquidity and Profitability: A Study of Selected Manufacturing Firms in Sri Lanka | Niresh.J.A | 2012 Sri Lanka | To find out the cause and effect relationship between liquidity and profitability | SS- 31 listed manufacturing firms in Sri Lanka<br>DS- Colombo stock exchange database<br>POS- 5 Years (2007-11) | Correlation analysis and descriptive statistics | There is no significant relationship between liquidity and profitability in selected firms. | Influence of factors like seasonal changes in demand, firm size, manufacturing cycle and technological changes on profitability |
| A Study of Financial Performance: A Comparative Analysis of SBI and ICICI Bank | Singh.B.A, Tandon.P | 2012 Allahabad, India | To measure, evaluate and compare the financial performance of the selected banks. | SS- 2 Banks<br>DS- Annual Reports<br>POS- 5 Years (2007-08 to 2011-12) | Ratio analysis, mean and compound growth rate | SBI is performing well and financially sound then ICICI but the later is better in managing efficiency in context of deposits and | Period of study could be extended. |

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| | | | | | | expenditure than the former. | |
| Trends in Liquidity Management and their Impact on Profitability : A case study | Nandi.C.K | 2011 West Bengal, India | 1. To examine and evaluate the overall efficiency of the management of working capital in terms of liquidity trends of BHEL<br>2. To study how liquidity management affects the profitability | SS- 1<br>DS- Published annual reports of BHEL<br>POS- 11 Years (1999-2000 to 2009-10) | Multiple regression analysis, T-test, F test, Durbin Watson test and Chi-square test, simple correlation, trend analysis | BHEL always tries to maintain adequate amount of net working capital in relation to current liabilities so as to keep a good amount of liquidity. | Comparative analysis of two or more companies can be done. |
| Profitability, Efficiency and Liquidity of the Co-operative Banks in Greece | Petropoulos. P.D Kyriazopoulos.G | 2010 Greece | 1. To present, estimate and analyze the basic financial index of the co-operative banks. 2. To make a comparative analysis of the financial index of co-operative | SS- 16 Co-operative Banks<br>DS- Reports of the Bank of Greece<br>POS- 4 Years (2003-07) | Comparative analysis | Profitability and efficiency of cooperative banks is satisfactory. | More variables can be incorporated and time period could be extended. |

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| | | | banks with corresponding ones for the whole banking sector. | | | | |
| An Example of the Use of Financial Ratio Analysis: The Case of Motorola | Collier.HW, Grai.T Haslitt.S Mc Gowan.CB | 2004 USA | To show exactly how to compute ratios and to demonstrate the difficulty in applying the principles of financial ratio analysis when data is not homogenous. | SS- 1 DS- Annual Report POS- 3 Years (1999-2002) | Du Pont system of financial analysis | The difference in the industry characteristics complicates the financial ratio analysis of a single company having various units falling under different industries. | Comparison of two companies having different segments can be done and time period can be extended. |
| Profitability Analysis of Indian Food Products Industry: A Case Study of Cadbury India Ltd. | Debasis.R, Debashish .S | 2001 India | To assess the degree of relationships between profitability ratio and some important parameters of company's position and performanc | SS-1 DS- Annual reports POS- 10 Years (1987-88 to 96-97) | Correlation coefficient, multiple regression | Company is earning an increasing profits over the years. | Comparative study of more units can be done. |

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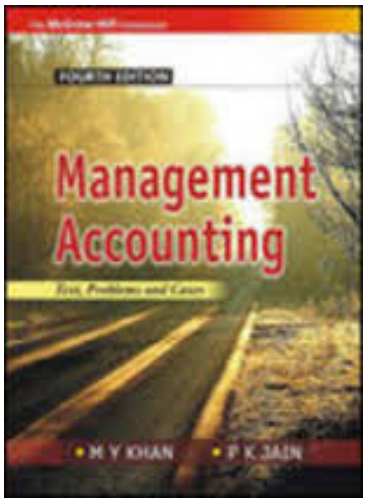
## Research Gap identified

- Most of the studies are conducted over any one or two aspect of ratio analysis.
- Most of the studies are confined to study of financial statement analysis of a single organization or any two organizations.
- The period of study in most of the studies is three to five years.
- Most of the studies have been conducted on banking sector.
- None of the study has been conducted on all the aspects of financial analysis.
- None of the study has been conducted on Paper Industry.
- No study has been conducted to analyze the financial efficiency and productivity together.

# Book Review




**Title of the Book :Management Accounting**

**Author: M.Y. Khan, P.K. Jain**

**Published By: , Tata McGraw-Hill Publishing Company Limited, New Delhi.**

**Edition: 2007**

**Summary**

The Book is divided into seven parts subdivided in 23 chapters. The books explains in detail the various tools of financial statements analysis and cost control for managerial decision making process. It is very useful for analyzing financial efficiency and mangerial decision making.The seven parts are stated as under:

**Part 1 Background**

**Part 2 Financial Accounting**

**Part 3 Financial Analysis**

**Part 4 Cost Accumulation**

**Part 5 Profit Planning**

**Part 6 Cost Control**

**Part 7 Decision Making**

# Research Framework

**Analysis of Financial Efficiency**

- Analysis of Liquidity
- Analysis of Capital structure
- Analysis of Profitability
- Analysis of Efficiency

**Analysis of Productivity**

- Analysis of Material Productivity
- Analysis of Labour Productivity

# Motivation/Justification and Relevance

The Indian Paper Industry is a booming industry and is expected to grow in the years to come. The usage of paper cannot be ignored and this awareness is bound to bring about changes in the paper industry for the better. It is a well known fact that the use of plastic is being objected to these days. There are few plastics which do not possess the property of being degradable, as such, use of plastic is being discouraged. Excessive use of non degradable plastics upsets the ecological equilibrium.

The new millennium is going to be the millennium of the knowledge. So demand for paper would go on increasing in times to come. In view of paper industry's strategic role for the society and also for the overall industrial growth it is necessary that the paper industry performs well. Paper is one of the most important consumable products. It is not only used for packing but also forms an integral part of the educated society. At present there are over 850 paper mills manufacturing a wide variety of items required by the consumers. These paper mills are manufacturing industrial grades, cultural grades and other specialty papers. The paper industry in India could be classified into 3 categories according to the raw material consumed.

1. Wood based
2. Agro based &
3. Waste paper based

The number of wood based mills is around 14 and balance 836 mills are based on non-conventional raw materials (Agro Residues and Recycled fiber - waste paper)

The Indian Paper Industry is among the top 12 Global players today, with an output of more than 13.5 Million tones annual with an estimated turnover of Rs. 35000 Crores. Many foreign players are entering India by acquiring or by setting up new plants in India with an aim to make India as a paper manufacturing hub which will bring huge investments to Indian Pulp and Paper Industry.

Today India is an excellent and vibrant market for Paper and Paper products due to high spending of the middle class people. Some of the Government initiatives in the social development front also make the industry more vibrant.

A number of researches have been undertaken which highlight the profitability and liquidity position of various industries but no research has been conducted to study the overall aspects of financial statements which are liquidity, profitability, capital structure,

market ratios and activity ratios. Moreover none of the research has been done to study the productivity of various elements of cost which are material, labor and overheads.

Many researches have been done to analyze the financial statements of banking sector, insurance sector and other industries of manufacturing sector but none of them has analyzed the financial statements of Paper Industry in India. Thus this research has been undertaken with an aim to study the financial efficiency of the paper mills in respect of liquidity, profitability, capital structure and activity. Moreover the material and labour productivity will also be analyzed. The paper mills using wood as raw material have been selected for the study because it is a natural resource and has to be used optimally. This research will be of great help to the academicians, investors, managers and future researchers.

# Objectives of the Study

The main objective of the study is to analyze the financial efficiency and productivity of Paper Mills in India. The broad objectives of the study can be summarized as:

- To evaluate the Liquidity of the selected paper mills in India.
- To evaluate the Profitability of the selected paper mills in India.
- To evaluate the Capital Structure of the selected paper mills in India.
- To evaluate the Efficiency of the selected paper mills in India.
- To evaluate the Material Productivity of the selected paper mills in India.
- To evaluate the Labour Productivity of the selected paper mills in India

# Hypotheses

1. There is no significant difference in the Liquidity of the selected paper mills.
2. There is no significant difference in the Profitability of the selected paper mills.
3. There is no significant difference in the Capital Structure of the selected paper mills.
4. There is no significant difference in the Efficiency of the selected paper mills.
5. There is no significant difference in the Material Productivity of the selected paper mills.
6. There is no significant difference in the Labour Productivity of the selected paper mills.

# Methodology

## Research Design:

"Plan your work and work your plan." For a research to be carried out firstly one has to prepare a research design. It should reflect the approach to be implemented in solving the problem, sources and information related to the problem and the period of study. Thus a research design is said to be a blueprint for the research which consists of enunciating the problem, formulating a hypothesis, collecting the facts or data, analyzing the facts and reaching certain conclusions either in the form of solutions towards the concerned problem or in the form of certain generalizations for some theoretical formulations.

### Universe:

The universe of the study consists of the entire Paper Industry in India.

## Sample:

- Sampling is the process by which inference is made for the whole universe by examining a part of it. Here in this study judgment sampling method has been used.
- The sample units for the study are 4 paper mills in India which are as under:

  (a) Ballarpur Industries Ltd.

  (b) J K Papers Ltd.

  (c) West Coast paper Mills Ltd.

  (d) The Andhra Pradesh Paper Mills ltd.

### Data Collection:

Secondary source of data will be used to collect the data. For this the annual reports of the sample companies would be collected through companies' website. Besides this data will also be collected through different journals, books, magazines etc.

## Period of Study:

The study would cover a period of 10 years ranging from 2004-05 to 2013-14.

## Tools for Analysis:

- Ratio analysis
- Trend analysis
- Descriptive statistical tools like arithmetic mean, standard deviation, coefficient of variation will be used to study the nature of data collected.
- Chi Square test
- One way ANOVA

# Chapterization Plan

Chapter 1: Conceptual Framework of Financial Efficiency and Productivity

This chapter will provide an insight to the concept of financial efficiency in terms of liquidity, profitability, activity and financial structure. This chapter will also throw light on the concept of productivity.

Chapter 2: Profile of Paper Industry in India

This chapter would deal with a detailed description of the paper industry in India, its historical as well as present scenario. It will also throw light on profile of the selected paper mills in India.

Chapter 3: Research Methodology

This chapter will provide a detailed explanation of research design, sample design, review of literature etc. The chapter will be subdivided into following subsections-

3.1 Problem identification

3.2 Review of literature

3.3 Title of the study

3.4 Objectives of the study

3.5 Hypotheses

3.6 Scope of the study

3.7 Period of the study

3.8 Data collection and data analysis

Chapter 4: Analysis of Liquidity

This chapter will include the concept of liquidity. Liquidity of the sample units will be analyzed in this chapter.

Chapter 5: Analysis of Profitability

This chapter will include the concept of profitability. Profitability ratios based on sales and capital employed will be evaluated in this chapter.

Chapter 6: Analysis of Efficiency

This chapter will explain the concept of efficiency. Efficiency ratios of the sample units will be analyzed in this chapter.

Chapter 7: Analysis of Capital Structure:

This chapter will explain the concept of capital structure and its various components. Capital structure ratios of the sample units will be analyzed in this chapter.

Chapter 8: Analysis of Productivity

This chapter will explain the concept of input, output and productivity. Productivity in respect of Material and Labour of the sample units will be analyzed in this chapter.

Chapter 9: Summary, Findings and Conclusions

This chapter will summarize the findings and give remarkable conclusions.

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